I. ER7-SERIES FOLDOVER 1:6 RAMP INTRODUCTION

This manual applies to the Ricon FoldOver ER7-Series 1:6 Low Floor Bus Ramp when installed in transit vehicles. The chapters in this service manual contain a product description, maintenance instructions, and a spare parts list. The descriptions in this chapter apply to the Ricon FoldOver ER7-Series 1:6 Low Floor Bus Ramp when installed in transit vehicles. The FoldOver ramp is installed in transit vehicles to accommodate persons with disabilities using mobility-aid equipment or who cannot easily climb steps. The electro-mechanically powered ramp folds into the vehicle vestibule flooring when not in use.

All ER7-SERIES 1:6 RAMPS-series ramps have a 1000 lb. (453kg) load limit. Passengers must use the ramp one at a time; **do not overload ramp**. Be certain that persons with mobility-aid equipment fit between the left- and right-side ramp barriers without any interference before allowing use of ramp.

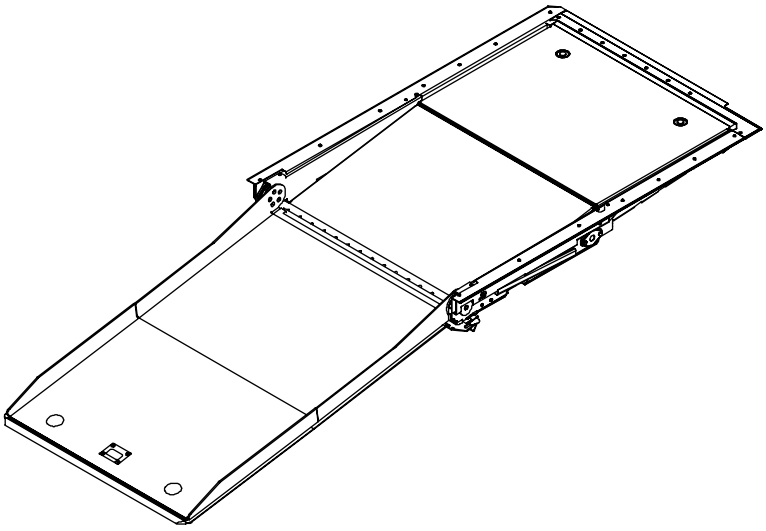

FIGURE 1-1: RICON FOLDOVER 1:6 RAMP

A. RAMP FEATURES

1. INTERLOCK SUPPORT

The ramp electronics can interface with the vehicle interlock circuitry to prevent vehicle departure when ramp is deployed. The ramp interlock circuitry senses the position of the ramp (stowed or deployed) and makes this information available by the controller and through the 55-pin amp harness connector. A vehicle interlock circuit typically requires that the following conditions be met before operating power is supplied to ramp:

- Park vehicle and set parking brake.
- Place transmission in neutral.
- Open vehicle door adjacent to ramp.

2. AUDIBLE ALERT

NOTE: This feature is optional and may not have been connected during ramp installation.

The ramp supports an audible alert device that sounds while the ramp is in motion.

3. RAMP CONTROL PANEL

Refer to **Figure 1-2.** Ricon typically does not provide a control panel. However, the ramp can be operated with one similar to that shown (the actual panel appearance will vary between transit authorities and vehicles). The control panel is normally installed in the driver area. It should have a power ON/OFF switch, a power on indicator light, and a spring-loaded, three-position ramp control switch (center-off). The ramp receives power from the vehicle when the interlock conditions are met and the power on/off switch is ON. The control panel can then be used to transmit deploy or stow signals to the ramp.

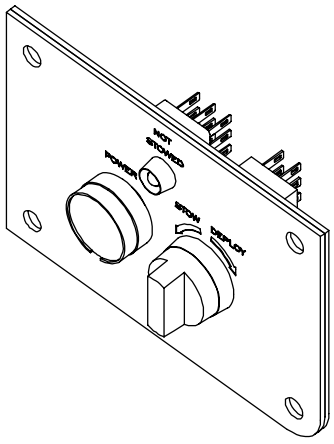

FIGURE 1-2: TYPICAL CONTROL PANEL

B. RICON PRODUCT SUPPORT

If you have questions about this manual, or you need additional copies, please contact Ricon Product Support at the locations listed. Also, refer to the Ricon website at: **www.riconcorp.com**

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C. RICON TWO-YEAR LIMITED WARRANTY

The following warranty provides two years of limited coverage for the Ricon FoldOver ER7-Series 1:6 Low Floor Bus Ramp.

RICON FOLDOVER ER7-SERIES 1:6 LOW FLOOR BUS RAMP
TWO-YEAR LIMITED WARRANTY

Ricon Corporation (Ricon) warrants to the original purchaser of this product that Ricon will repair or replace, at its option, any parts that fail because of defective material or workmanship as follows:

- Repair or replace parts for a period of two years starting from the date ramp is put into service. Obtain a complete list of parts covered by this warranty from Ricon Product Support.
- Labor costs for specified parts replaced under this warranty for a period of two years from the date put into service. A Ricon rate schedule determines parts covered and labor allowed.

This Warranty Does Not Cover:

- Malfunction or damage of product parts caused by accident, misuse, lack of proper maintenance, neglect, improper adjustment, modification, alteration, mechanical condition of vehicle, road hazards, overloading, failure to follow operating instructions, or acts of nature (i.e., weather, lightning, flood).

NOTE: Ricon recommends this product be inspected by a Ricon authorized dealer or qualified service technician at least once every six months, or sooner if necessary. Perform required maintenance at this time.

⚠ WARNING!

THIS PRODUCT HAS BEEN DESIGNED AND MANUFACTURED TO EXACT SPECIFICATIONS. ANY MODIFICATION OF THIS PRODUCT CAN BE HAZARDOUS.

This Warranty is Void If:

- The product is not installed and maintained by a Ricon authorized dealer or qualified service technician.
- The product is modified, in any respect from its original design, without written authorization from Ricon.

Ricon disclaims liability for any personal injury or property damage that results from operation or use of a Ricon product that is modified from the original Ricon design. No person or company is authorized to change the design of this Ricon product without written authorization from Ricon.

Ricon obligation under this warranty is exclusively limited to the repair or exchange of parts that fail within the applicable warranty period.

Ricon assumes no responsibility for expenses or damages, including incidental or consequential damages. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply.

Important: The warranty registration card must be completed and returned to Ricon within 20 days after product installation to validate this warranty. The warranty is not transferable.

The warranty gives specific legal rights. There may be other rights that vary in each state.

D. SHIPPING INFORMATION

- When the product is received, unpack the product and check for freight damage. Claims for any damage should be made to the carrier immediately.
- Be sure the ramp assembly contains all items listed on the included bill of material. Please report any missing items immediately to Ricon Product Support. Save bill of material for later reference. Return the completed warranty and owner registration cards to Ricon within 20 days to validate warranty.

NOTE: The Sales or Service personnel must review the Warranty and this Operator Manual with the user to be certain that they understand how to safely operate the product. Instruct the user to follow the operating instructions without exception.

E. CUSTOMER ORIENTATION

1. **Figure 1-3** shows major components of the ER7-Series FoldOver 1:6 ramp. A description of each component is provided in **Table 1-1**. Refer to Chapter IV "Parts Diagrams and Lists" for more details.

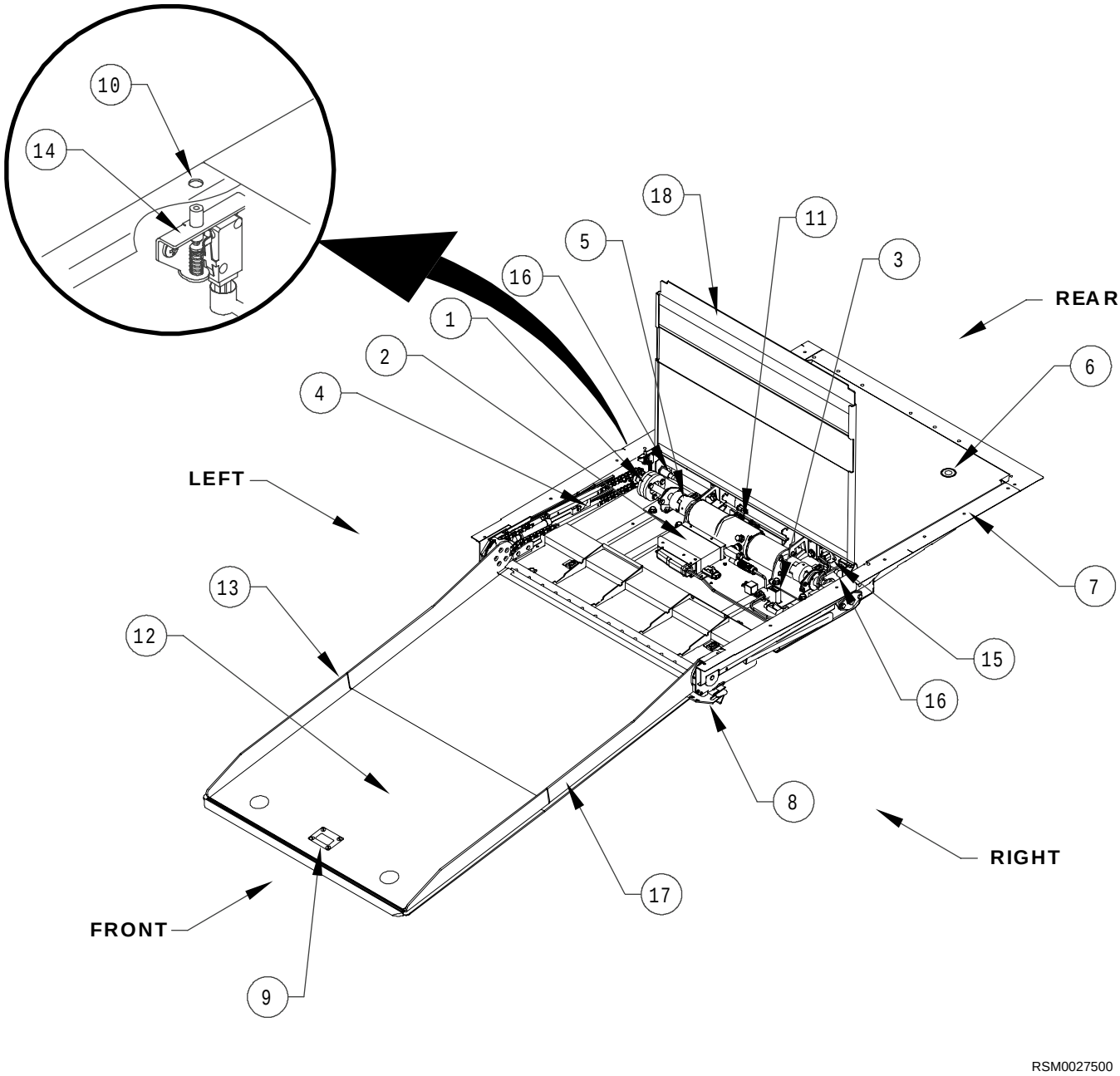


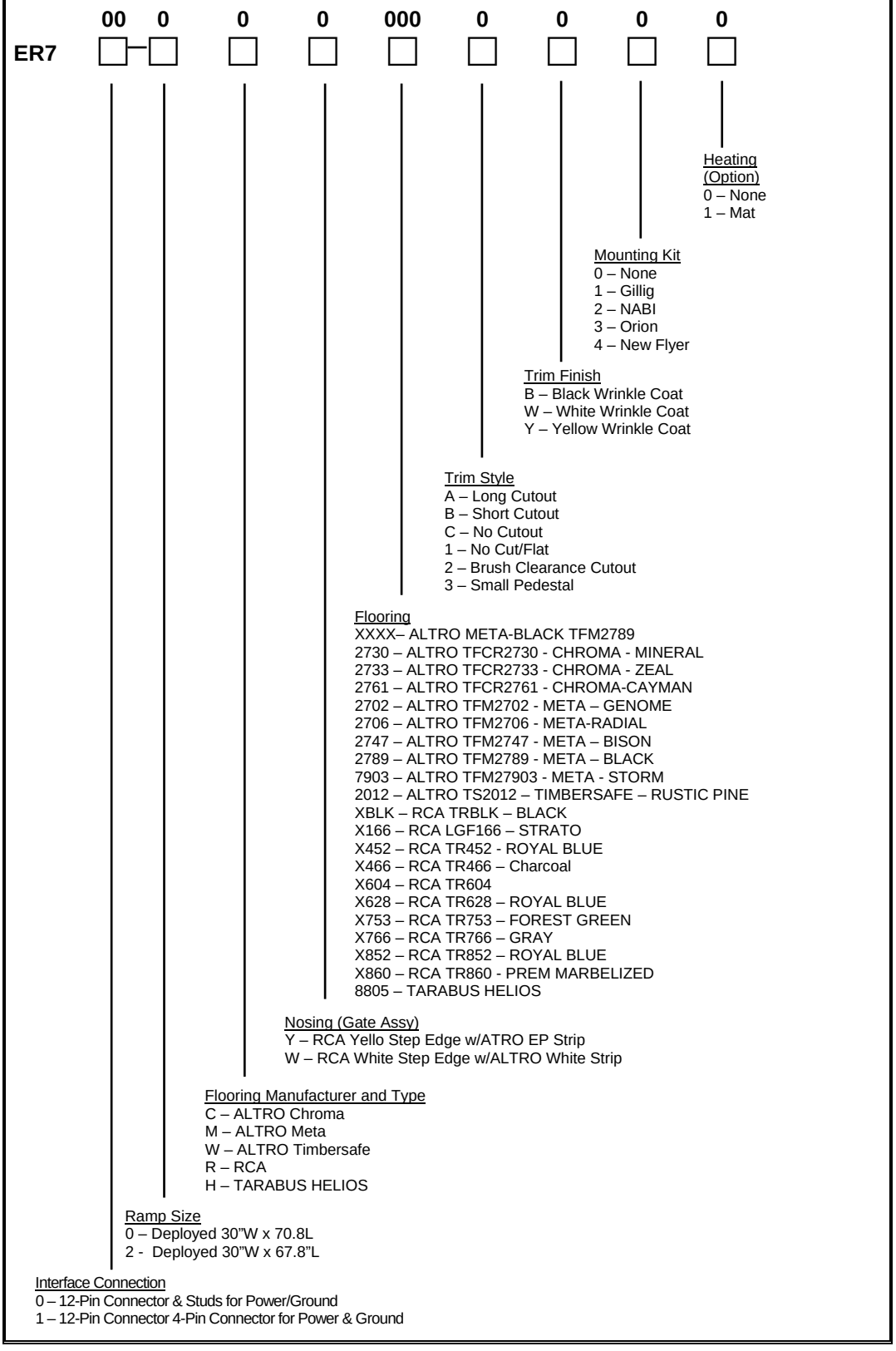
FIGURE 1-3: ER7-SERIES 1:6 RAMP MAJOR RAMP COMPONENTS

TABLE 1-1: MAJOR ER7-SERIES FOLDOVER 1:6 RAMP COMPONENTS	
ITEM	**DESCRIPTION**
Front, Rear, Left and Right	Reference point from outside the vehicle looking inward.
1	Adjustable Coupler - Use for adjustment and alignment of chain sprocket.
2	Controller – Translates electrical commands from bus control panel into signals that control ramp electro-mechanical components. Monitors ramp position and drives counter.
3	Counter – Counts each cycle.
4	Chain Spring Actuator Assembly - (Left & Right) Mechanism that assists in the Deploy and Stow of platform.
5	Couplings - (Left & Right) Transmits rotary motion and attaches the drive motor shaft assemblies to the dual gearboxes.
6	Electromagnets - Magnets that lock the ramp when ramp is fully stowed.
7	Flange Kit - Perimeter trim pieces that are installed after the ramp has been installed in vehicle.
8	Front Cover - Front edge of ramp that opens and closes when platform is deployed or stowed.
9	Hatch Handle - Use to assist in manual deploy or stow ramp.
10	Manual Deployment Hole – Location for tool to manually activate plunger switch.
11	Motor Drive System - Electro-mechanical motor-gearbox combination used to operate the ramp.
12	Non-Slip Surface – Flooring over which passengers traverse.
13	Platform Assembly - Area where passengers traverse over to enter and exit vehicle.
14	Plunger Switch - Switch that sends a signal to the ramp controller to disengage electromagnets and manually operate platform. Plunger Switch is activated when a tool is inserted and engages sensor through the Manual Deployment hole.
15	Positive Connection Block – Connection through which the ramp receives power from vehicle.
16	Proximity Sensors - Magnetic sensor devices that send signals to the ramp controller to indicate when the ramp is fully stowed (locks electromagnets) or deployed (unlocks electromagnets).
17	Ramp Tray Barrier - Left and Right side barrier of platform.
18	Slanted Floor Plate (Access Cover) - Portion of ramp that passenger traverses over to enter and exit vehicle which also provides access to electro-mechanical ramp components.
END OF TABLE	

F. RAMP PART NUMBERS

Refer to **Table 1-2** for an explanation of the ER7-Series ramp part number. Among other things, use of the table can determine whether your ramp is equipped with a mounting kit or the type of flooring material used. The table also provides ramp dimensions that can help to determine which mobility equipment fits safely on the ramp.

TABLE 1-2: ER7 –SERIES 1:6 RAMP PART NUMBER EXPLANATION


00 0 0 0 000 0 0 0 0
ER7
Heating (Option)
0 – None
1 – Mat
Mounting Kit
0 – None
1 – Gillig
2 – NABI
3 – Orion
4 – New Flyer
Trim Finish
B – Black Wrinkle Coat
W – White Wrinkle Coat
Y – Yellow Wrinkle Coat
Trim Style
A – Long Cutout
B – Short Cutout
C – No Cutout
1 – No Cut/Flat
2 – Brush Clearance Cutout
3 – Small Pedestal
Flooring
XXXX– ALTRO META-BLACK TFM2789
2730 – ALTRO TFCR2730 - CHROMA - MINERAL
2733 – ALTRO TFCR2733 - CHROMA - ZEAL
2761 – ALTRO TFCR2761 - CHROMA-CAYMAN
2702 – ALTRO TFM2702 - META – GENOME
2706 – ALTRO TFM2706 - META-RADIAL
2747 – ALTRO TFM2747 - META – BISON
2789 – ALTRO TFM2789 - META – BLACK
7903 – ALTRO TFM27903 - META - STORM
2012 – ALTRO TS2012 – TIMBERSAFE – RUSTIC PINE
XBLK – RCA TRBLK – BLACK
X166 – RCA LGF166 – STRATO
X452 – RCA TR452 - ROYAL BLUE
X466 – RCA TR466 – Charcoal
X604 – RCA TR604
X628 – RCA TR628 – ROYAL BLUE
X753 – RCA TR753 – FOREST GREEN
X766 – RCA TR766 – GRAY
X852 – RCA TR852 – ROYAL BLUE
X860 – RCA TR860 - PREM MARBELIZED
8805 – TARABUS HELIOS
Nosing (Gate Assy)
Y – RCA Yello Step Edge w/ATRO EP Strip
W – RCA White Step Edge w/ALTRO White Strip
Flooring Manufacturer and Type
C – ALTRO Chroma
M – ALTRO Meta
W – ALTRO Timbersafe
R – RCA
H – TARABUS HELIOS
Ramp Size
0 – Deployed 30"W x 70.8L
2 - Deployed 30"W x 67.8"L
Interface Connection
0 – 12-Pin Connector & Studs for Power/Ground
1 – 12-Pin Connector 4-Pin Connector for Power & Ground

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